zSpace March 2017 Update

We have struggled with consistent implementation of zSpace and did not progress with business integration. We asked our Business Service team, led by Michelle Krefft, to get involved in January, 2017. This has led to additional training completed by zSpace with the teachers and VR staff as well as a series of business contacts. Below is a summary of those efforts.

Just wanted to keep everyone informed of the progress we made today with zSpace. Amy, FCHS and myself toured 3 businesses today with the intention of identifying the pieces that might be able to be transferrable to zSpace:
1. Larson's Manufacturing. They make doors in Lake Mills and are VERY open and excited to partner with the zSpace. Things that would be critical for this job are teamwork, eye hand coordination, measuring, ability to use tools and of course the basic soft skills of coming to work. FCHS staff could not think of any programs on zSpace that could match up with the areas mentioned, but at our training on 2-24-17; we plan to talk with the trainers about ideas they may have for these types of skills. BUT- this is the BEST part!- as we talked with them about benefits other factories we have partnered with benefited from job carving and we described what this looked like in other factories, as we toured and evaluated the job, the manager would say- "This looks like what you described; instead of paying someone line wages to move & bale the cardboard and gather and dump the rags, we could bring in someone to do these tasks a couple hours a week and actually save money. Amy has been working with them on creating job analysis of the different jobs and is following up to write a job description for this job carve. Additionally, she is working with them on summer camp stuff AND they are coming to the high school to look at zSpace and provide feedback on how we can utilize it for preparation of students. Amy has done a terrific job of developing this relationship and I think it is going to pay off for her! They were talking about job sharing, job carving, how to create jobs for people and the best part is that they are doing it because they recognize it will give them access to another pool of talented people and save them money.
2. Hy-Vee- We visited in all the areas. 2 topics were discussed the most. Butchers in the meat department- the only training they get is on the job- then they move from one store to the next bargaining for highest pay. We discussed apprenticeship opportunities where interested students could do some of the schooling part at 17 3/4 and then begin the skill training at 18 having a skillset upon graduation from high school. Amy is going to facilitate a meeting between IWD and Hy-Vee to see what this could look like - helping Hy-Vee with retention issues. In the pharmacy, we talked a lot about the pharmacy tech position and learned this is all on the job training. You do not need a college education to be a pharmacy tech. If one has basic understanding of medical terminology and the abbreviations, they will be ahead of the other applicants. Persons are hired for these positions and then sit for a certification paid for by Hy-Vee. This could be an area we can develop using the zSpace- medical terminology and some of the other medical modules could help our students prepare for

a pharmacy tech position. We are going to work on identifying modules and working to align these with the business needs, including Hy-Vee and other pharmacies.
3. KIMT- we learned that technology was the most important thing for this media company. the school felt that zSpace was most applicable to this business because they stressed technology being the number one skillset they were looking at. Most positions only require a high school graduation so we were going to further investigate which technology modules would most align with this business and bring it back to them for further input.

We are currently lining up another day of tours. This has been fantastic working with businesses to help solve their needs through our wonderful services. I am excited to continue working with Amy and the FCHS staff to see how this comes together.

Business Services

From Amy Markham, VR Counselor

From: Markham, Amy [mailto:amy.markham@iowa.gov]
Sent: Tuesday, February 21, 2017 2:15 PM
To: Steven Faulkner <steven.faulkner@iowa.gov>; Krefft, Michelle <michelle.krefft@iowa.gov>; Worden, Lisa <lisa.worden@iowa.gov>
Subject: zSpace

Hey there! Just an FYI that I was able to talk about zSpace a little bit in the Advanced Manufacturing sector board meeting today. It was a little unexpected so I was just give a few minutes to give a brief rundown of what it is - but they want more information so I will probably be an agenda item for the next meeting. For this I will show them some examples on line of the program so they have a better idea of what it looks like - maybe just the youtube examples from zSpace.

Anyway, Gary McCarthy and Brian Larson were both there so I could use them as examples of how we are touring businesses and identifying skills needed to enter the workforce and relating it back to the system. Everyone seemed impressed with this idea but my main goal was to have them be prepared for when I contacted them for tours :)

Mayor Erb was there from Charles City as well, and I think he may be willing to help with some of the Charles City businesses and getting into some of these if needed - not just AM but other sectors as well.

Thanks!
Amy

Also the following article was published in the Education Newsletter:

Perchance to dream….

Students virtually land good-paying jobs through hands-on exploration

Two schools are teaching students to dream. And those dreams served up at Forest City and Charles City high schools in northern Iowa are virtually at the students' fingertips.

Thanks to an initiative through the Iowa Vocational Rehabilitation Services (IVRS), the schools enable students with special needs the ability to virtually learn about good-paying jobs they never knew existed. Through the use of software, the schools have created a virtual learning environment, offering students a front seat in interacting with simulated objects, from a car engine to the human heart.

The hands-on exploration supplements classroom instruction, and opens the doors for the students to a work world they never knew existed. It gives them, firsthand, a chance to try on different career options.

"A lot of times high school students, and even their parents, don't realize the number of jobs there are out there," said IVRS Counselor Amy Markham, who works with both Forest City and Charles City high schools.

"This gives them exposure to the variety. For instance, it might show them all the jobs that are possible at a place like Winnebago, and that the company has far more jobs than just the assembly line.

"We want to make sure students know there are lots of options in that middle skills area, such as advanced manufacturing, health care, nursing. Parents are awed that their kids could have jobs within the community. They go from thinking their child may be dependent all his life to seeing their child can be a productive citizen within the community."

The schools are in the first year of a two-year pilot through IVRS, so data is not yet available on what kind of impact it is having on students academically or career wise. But there's plenty of anecdotal evidence that it's stoking engagement among the students.

In one instance, four students – none of whom had much interaction with one another before – were assigned to complete a computer task. In many ways, the foursome didn't complement one another's personalities, and the collaborative task at hand seemed a long shot.

But one by one, students started falling in line. They discovered how an engine ran. Then they dissected a virtual heart.

The boy with a written language deficit, in charge of writing down their discoveries, suddenly wasn't shy. "How do I write that?" he would ask unapologetically. Even the stalwart loner with social-emotional problems who initially didn't want to participate started sitting upright in her chair, getting more and more interested, and finally joining the work.

"School was over, but the kids didn't want to leave," said Kenda Jochimsen, IVRS bureau chief. "I was talking to the teacher, and though these four kids wouldn't interact with one another earlier, they were really collaborating, communicating in a respectful way. The teacher hadn't seen those kids do any collaborative learning before."

The initiative came about when IVRS and the schools saw opportunity: the statewide push for STEM (science, technology, engineering and math) education, the plethora of unfilled, good-paying jobs that require that kind of knowledge, and the state's Future Ready initiative, which wants to see a minimum of 70 percent of graduating high schoolers receive either training or education beyond high school by the year 2025.

"We have a middle-skills gap," Markham said. "We wanted to make sure we could help with that.

"We are hoping to look at curriculum and take it to businesses. Some of the factories in north Iowa have testing for employment. One business has a 50 percent failure rate – people cannot get through the testing. If we tweak the software, we can gear them toward what businesses need in the area."

Traditionally, many students with special needs don't get much exposure to STEM subjects. But the initiative could change that.

"We want the students to have more exposure to a STEM curriculum to invoke more interest in pursuing STEM occupations, which in the long run produces higher incomes and a work-ready labor force comprised of individuals with disabilities," Jochimsen said. "In the end, it will increase family incomes and move more people with disabilities into the middle income."

Jochimsen said they will be studying the impact on employment outcomes and areas of employment the students developed interest in.

"We also want to see if this impacts the local labor force for employers who often have difficulty getting the labor for these occupations because rural areas find that often their folks move to the 'big city,'" she said.

From the teaching standpoint, the initiative is seen as a great supplement to the classroom.

"The reaction has been good and students have been very curious and willing to explore," said Forest City High School's Ryan Eastvold, a special education teacher. "Students who have classes in science have been more interested in using the computer as an extension of learning. The content is more relatable and aligns easier with what they are doing in class."

Eleventh grader Joey Paulson agreed.

"I really like going on the computer," Joey said. "I want to go into construction, and this lets me see how a building is really constructed, from framing to sheetrock."

Joey, who plans on going into construction, eagerly shows visitors how you can strip away the exterior of a house, leaving behind just the rafters. He takes the visitors to the kitchen area.

"Kitchens are my favorite part," he said. "You can put a lot of detail into a kitchen, from cupboards to a sink to counters."

It's too early to see how the initiative impacts grades, Eastvold said.

"But I think it has improved understanding concepts," he said. "In Joey's case, I think it's helped him understand parts of a motor, how circuits work and why blueprints of a house are important.

"This is a great tool for STEM and helping special education students gain interest in STEM careers which are better paying jobs."

The work truly is teaching students to dream.

“We are awakening students to their potential and interests,” Markham said. “And we are encouraging parents to see it.”